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Soil and Water Conservation News

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Fifty Years—A Proud Tradition

April 27 marks the Golden Anniversary of the Soil Conservation Service in the U.S. Department of Agriculture—a milestone in a voluntary conservation program that has involved more than 2 million farmers, ranchers, and other land users.

SCS can be proud of what it has done. The agency has helped to reduce soil erosion, conserve water, reduce flooding, improve rangeland, and protect other natural resources.

Today, 2 out of every 5 acres of farmland is adequately protected against soil erosion. Innovative farmers are protecting many of these acres with conservation tillage and no-till. We can be proud of the role we've played in convincing farmers to adopt these cost-effective, soil-saving techniques.

SCS efforts in promoting conservation tillage today parallel the agency's early efforts in convincing farmers to use contour strip cropping, terraces, crop rotations, and other practices that returned eroded fields to productive cropland and pasture. Along the way, SCS has achieved an international reputation in the field of soil and water conservation.

Fifty years has taught us that no single program, agency, or group can solve the Nation's soil and water problems. No single approach—Federal, State, or local—has all the answers.

What has been accomplished is the result of a combination of these along with the leadership and investments of farmers and ranchers; the support of conservation districts, professional organizations, and associations; and the dedication of people from all walks of life who feel a sincere sense of stewardship for the land.

Everyone in the United States has benefited from the protection of soil productivity and a cleaner environment.

It's time for celebration as we observe 50 years of soil conservation, and it's time for renewed commitment as we look ahead.



Cover: Dust storm in Cimarron County, OK, 1936.
(Photo by Arthur Rothstein.)

John R. Block
Secretary of Agriculture

Peter C. Myers, Chief
Soil Conservation Service

All programs of the U.S. Department of Agriculture are available to everyone without regard to race, creed, color, sex, age, or national origin.

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How SCS Came To Be

Those brief, exciting, often hectic 20 months between September 19, 1933, when Hugh Hammond Bennett became Director of the Soil Erosion Service (SES), and April 27, 1935, when the Soil Conservation Act was passed, were important times for the future course of the conservation movement. That there would be national legislation to provide for a continued commitment to soil conservation was by no means assured. Current friends of the conservation movement can look to that period with a sense of admiration; not with a feeling that no mistakes were made, but with an appreciation for the early leaders who transformed vision into reality.

Certainly, Hugh Bennett foresaw and worked for a government organization dedicated to soil conservation. His vision of a permanent agriculture had no room for a brief flurry of emergency employment activities that would fade from the tapestry of conservation once the crisis had passed. Shortly after taking up the new work he wrote to his second in command, Walter C. Lowdermilk: "We are getting into a line of work which I think is bound to carry on . . . We have no insurmountable wall of prejudice standing out in front of us. The road is wide open, and if all of us are duly consumed with the magnitude of the undertaking, the importance of succeeding in our plan, and the absolute necessity of not giving an inch until we have really accomplished something on a large scale, then we are bound to carry on until we have completed the task laid out for us."

It was as though Bennett's career had been an apprenticeship for the work he was now beginning. His experience—and opinions as to corrective measures—was SES's main asset as the young group went about its work in a manner that enhanced its chance for permanence, rather than in a manner that ensured its demise after the Depression. Through the years of reading, corresponding, and conversing with the handful of people active in soil conservation, Bennett knew to whom he would entrust the field work—the work that would actually determine the success or failure of the program. These were the



Photo by Dorothea Lange.

people who believed as he did in a coordinated approach to conservation employing "all practical measures of control in accordance with the adaptability of the land." His early correspondence makes clear that he thought the coordinated farm plan would involve the cooperative efforts of agronomists, foresters, range specialists, soil experts, engineers, and economists.

Equally important to the future of the work was his determination that the money be

spent on conserving farm lands with a future, and demonstrating that expensive land restoration would not be necessary under proper land use.

The watershed-sized projects—demonstrational as well as experimental—would reveal the benefits of conservation area wide, beyond the individual farm. Another important tactic in the early days involved Bennett's attitude toward educating the public. He wanted to influence the body politic, not just the

The Nation and the Land

farmers. It was his ability to communicate, with the written and the spoken word, at all levels which started and sustained the movement during its early days.

To be sure, there were factors beyond SES's control which created a climate favorable to continuing the work: the persistent Depression, the dust storms blown eastward, and the magazines and newspapers with heart-rending photographs which documented poor land and poor people in a clearer focus than ever before.

Out in the field the demonstration projects were popular. Requests by farmers and their Congressional representatives for Civilian Conservation Corps camps and projects further enhanced the reputation of the Service. But the Congressional authorization for spending would expire on June 15, 1935. The impending deadline, combined with Bennett's desire for a permanent organization, brought things to a head.

Agricultural groups argued that such work belonged in the Department of Agriculture (USDA). Conservation friends in Congress stood ready to introduce legislation including all the authorities needed for a soil conservation agency. The prospect of legislation forced President Roosevelt to deal with the situation. He summoned Bennett to the White House in March 1935.

The conversation (as recounted by Bennett) showed how successful he had been. The President thought Bennett's group must be doing a good job since they had become the object of desire for acquisition. It seemed to the President that the agricultural nature of the work merited a change to USDA. With the President's blessing, events moved quickly and smoothly. On March 25, 1935, he transferred SES from the Department of the Interior to USDA. After brief hearings Congress passed the Soil Conservation Act which the President signed on April 27, 1935. All who had taken part in the movement could take pride in the charge of the Service, which was "to provide permanently for the control and prevention of soil erosion and thereby to preserve natural resources."

Douglas Helms,
historian, SCS, Washington, DC

In 1780, even before the new United States had adopted its constitution, the Nation had taken over the ownership and management of all public lands that were not part of the 13 original States. A few years later, Congress, in the Ordinance of 1785 and 1787, set up procedures for the sale of the lands and provided a mechanism for establishing States equal to the original 13 in every respect.

Laws governing the sales of the public lands were modified from time to time to permit settlers to obtain land on easier terms until 1862 when Congress offered 160 acres of the public domain to any settler who would improve the land and live on it for 5 years. At the same time, the State agricultural colleges and the Department of Agriculture were established, at least in part, to help homesteaders make the best use of the land. This concern for the land, publicly or privately owned, has continued to the present time.

Federal interests in land and water led to the establishment of many agencies primarily concerned with one aspect or another of land, water, and natural resources and their use and conservation. The first such agency was the General Land Office, created in 1812 to handle sales of the public domain. It was followed by the assignment in 1824 of responsibility for maintaining inland waterways to the Corps of Engineers, a responsibility which

has led to supplying water for municipal, industrial, and recreational use and to improving water quality.

The General Land Office was consolidated with the Grazing Service, formed in 1934 to manage the leasing of public lands to livestock men, as the Bureau of Land Management in 1946. The Bureau is responsible for the total management of 284 million acres of public lands, including all of their vast natural resources. Most of the remaining public land, 191 million acres, is managed by the Forest Service, created in 1905 to oversee the Federal forest reserves.

The Reclamation Act of 1902 authorized the Secretary of the Interior to locate, construct, operate, and maintain works for the storage, diversion, and development of waters for the reclamation of arid and semiarid lands in the Western States. The Reclamation Service was established in 1902 and renamed the Bureau of Reclamation in 1923.

A number of other agencies having responsibilities for particular aspects of soil, water, and other natural resources were created in the Department of Agriculture during the same period of time in which the Forest Service and the Bureau of Reclamation were established. The Bureau of Biological Survey was established in 1905 as an outgrowth of studies of the effects of insects and birds on



At left, a truck outpaces a dust storm, Prowers County, CO.
Near right, in early terrace construction mules provided the horsepower to pull a fresno or buck scraper.
Far right, Hugh Hammond Bennett, the first Chief of the Soil Conservation Service.

farm production and of surveys of distribution, food habits, and migration of birds and animals. The new Bureau's primary objective was the conservation of useful wildlife. In 1939, the Bureau was transferred to the Department of the Interior, where, in 1940, it was consolidated with the Bureau of Fisheries into the Fish and Wildlife Service.

Soils work in the Department of Agriculture began in the 1890's. In 1894, the publication of *Farmer's Bulletin No. 20, Washed Soils: How to Prevent and Reclaim Them* marked a milestone in soil conservation. In 1898, soil surveys were begun and in 1901, the expansion of the soil work was recognized by the organization of the Bureau of Soils. By 1927, when the Bureau of Soils was combined with the Bureau of Chemistry, the Bureau had divisions of Soil Survey, Soil Chemistry, Soil Physics, and Fertilizer Resources. In 1938, the Bureau of Chemistry and Soils was abolished, and the soils work was transferred to the Bureau of Plant Industry. Reorganizations continued, with the soil survey work being transferred to the Soil Conservation Service in 1952. A year later, most research functions in the Department, including soil and water conservation, were consolidated into the Agricultural Research Service.

Meanwhile, soil conservation programs had been moving ahead in the Department.

In 1929, Congress appropriated funds for the Department to investigate soil erosion and to establish regional soil erosion experiment stations.

The depression-born legislation of the 1930's offered an opportunity to deal more directly with soil conservation. The Soil Erosion Service, established in 1933 in the Department of the Interior under the leadership of Hugh H. Bennett, conducted demonstration and land-rehabilitation projects. In 1935, the Service was transferred to the Department of Agriculture and, under authority of law, was reconstituted as the Soil Conservation Service. Much of the soil conservation work was carried out through locally organized soil conservation districts through which farmers and the Federal Government could join forces in an all-out nationwide campaign to conserve the soil.

Soil conservation in itself helped preserve the amounts and quality of water available for both rural and urban uses. Since the establishment of the Soil Conservation Service, a series of laws—the Flood Control Acts of 1936 and 1944, the Watershed Protection and Flood Prevention Act of 1954, the Federal Water Pollution Control Act Amendments of 1972, the 1980 appropriation act authorizing the Rural Clean Water Program—have increased its responsibility

for water conservation and protection.

The Agricultural Conservation Program, another type of soil conservation activity, operated by the Agricultural Stabilization and Conservation Service and predecessor agencies, has existed alongside the Soil Conservation Service's program. This program undertakes cost-sharing conservation practices in direct cooperation with farmers, usually on a short-term basis.

Concern for soil and water and their use has been characteristic of Americans and their government since independence. Primary responsibility for soil conservation has been assigned to the Soil Conservation Service since 1935. In 1985 these programs are being studied—are they still necessary after 50 years? Will the American people support them as they have in the past? Even though much has been done, the Nation faces new threats of soil erosion and water loss and degradation.

Wayne D. Rasmussen,
chief, Agricultural History Branch, National Economics Division, Economics Research Service, USDA,
Washington, DC



Roosevelt Remembered

Many folks in Dutchess County, NY, remember Franklin D. Roosevelt as "the soil conservation President." In celebration of the 50th anniversary of the soil and water conservation movement, they have dedicated a memorial garden to Roosevelt and others from the county who have made significant contributions to conservation or agriculture.

Roosevelt was a native of Hyde Park in the northern part of the county. As President, he signed Public Law 74-46 creating SCS on April 27, 1935. He later urged all States to adopt the model Soil Conservation Districts Act.

"I need not emphasize to you the seriousness of the [soil erosion] problem and the desirability of taking effective action," Roosevelt wrote to the State Governors. "The nation that destroys its soil destroys itself."

The memorial garden was sponsored by the Dutchess County Soil and Water Conservation District and was built with private donations. It is in the community of Millbrook, which was the location of the first headquarters of the National Association of Conservation Districts.

James Calhoun,
district conservationist, SCS, Hudson, NY

Capital Observes 50th

A banquet will be held April 27 in Washington, DC, as part of the Capital's observance of the 50th anniversary of the Soil Conservation Service. Nearly 1,000 people are expected to dine on filet mignon and pay tribute to important figures in the soil and water conservation movement.

Floral arrangements for the banquet tables are to be furnished by the National Plant Materials Center (PMC), Beltsville, MD. These centerpieces will be made with 'Golden Jubilee', a variety of blackeyed Susan recently released as a conservation plant by the PMC at Big Flats, NY, and named for the anniversary of SCS. Diners will each receive a packet of Golden Jubilee seeds to take with them.

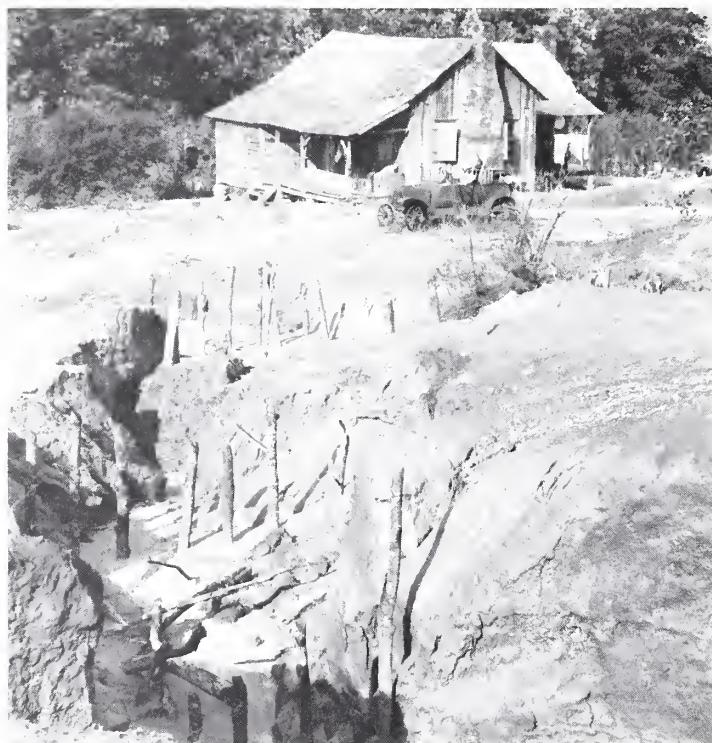
Earlier in the week, SCS State conservationists will arrive in Washington for a symposium on "Fifty Years of Soil and Water Conservation—Prologue to the Future." Administration officials, members of Congress, and leaders from conservation groups and other agencies will participate.

Several exhibits will be set up in observance of the anniversary. All are free and open to the public. Some will last into the summer, Washington's peak tourist season. Exhibits include:

- Other Federal agencies and private associations are contributing to "50 Years—Partners in Conservation," in the patio of the U.S. Department of Agriculture's Administration Building. This exhibit will be presented at an official ceremony April 22 and will be open during business hours through April 26.
- The National Archives will display "Fifty Years of Soil and Water Conservation: The Soil Conservation Service." This exhibit will consist of four display cases of historical documents, artifacts, memorabilia, and photographs about soil conservation and

the history of SCS. It will be in the main exhibition hall of the Archives, Constitution Avenue and Eighth Street NW, where it is expected to be seen by about a half million people by the time it closes July 31.

- The role different plants have played in conservation will be depicted in exhibits at the Botanic Gardens, First and Canal Streets SW, and at the National Arboretum, 24th and R Streets NE. The exhibit at the Botanic Gardens will be in three parts, depicting shoreline stabilization, wildlife habitat improvement, and range and pasture improvement. The exhibit at the National Arboretum will feature the use of conservation plants for residential landscaping. These exhibits will be open from mid-April through mid-May.
- An exhibit entitled "Saving Our Soil: 50 Years" will be on display during April at the Smithsonian Institution's Museum of American History, Constitution Avenue between 12th and 14th Streets NW. It will consist of artifacts and photographs.



This 1936 photograph of a typical tenant house surrounded by severely eroded land in Pickens County, SC, is featured in the exhibit at the National Archives.

Conservation Highlights 1984

Summary of Activities of the Soil Conservation Service for Fiscal Year 1984

In carrying out the National Conservation Program in 1984, the U.S. Department of Agriculture's (USDA) Soil Conservation Service concentrated on reducing excessive soil erosion on crop, range, pasture, and forest lands; conserving water used in agriculture; and reducing upstream flood damages.

SCS provided technical assistance to farmers and ranchers in applying conservation practices and systems that reduced soil losses in 1984 by 172 million tons. Making a big contribution to the soil savings were farmers applying conservation tillage and no-till.

SCS funds and technical assistance also helped farmers to conserve 1.2 million acre-feet of irrigation water.

In 1984, SCS completed work on 11 watershed projects, all with flood prevention as their main purpose. The completed projects are reducing flood hazards on 938,000 acres.

Through memorandums of understanding, SCS worked closely with soil and water conservation districts and with USDA, Federal, State, and local agencies and universities in promoting the conservation and wise use of soil, water, and related resources.

Conservation Tillage

Farmers used conservation tillage on more acres than ever before in 1984, according to the National Association of Conservation Districts' Conservation Tillage Information Center (CTIC). Of the 327.3 million acres planted to crops in 1984, farmers used some form of conservation tillage on nearly 97 million acres. Conservation tillage is any tillage or planting system that retains at least 30-percent residue cover on the soil surface. The CTIC reports that no-till, a conservation tillage method in which only a narrow seedbed is disturbed for planting, is the fastest growing tillage type. Farmers used no-till on 14.1 million acres compared to 10.1 million acres in 1983. SCS participated in many conservation tillage demonstrations and seminars to promote the soil-saving practices and participated in the national "Conservation Tillage—Strategies for the Future" conference cosponsored by USDA and 62 national organizations.

Targeting

In parts of 44 States and Puerto Rico, SCS, the Agricultural Stabilization and Conservation Service (ASCS), and other USDA agencies targeted funds and technical assistance to the most serious natural resource problems. Erosion reductions on treated acres averaged more than 7 tons per acre. Irrigation water conserved totaled 540,000 acre-feet in targeted areas and included 75,000 acre-feet in areas treated to reduce salinity.

Soil Surveys

In fiscal year 1984, 68 soil surveys were published and 69 survey manuscripts with maps were sent to be printed. More than 42.6 million acres were mapped during the year.

Each soil survey describes the physical and chemical characteristics of the soils in the survey area—generally a county. It names and classifies the soils according to a nationwide system and provides information on the potential and limitations of the soils for various uses. Detailed maps show where each soil is located.

Agricultural Conservation Program

Through the Agricultural Conservation Program (ACP), SCS provided technical assistance to 100,000 farmers and ranchers who installed conservation practices. Under long-term agreements, SCS assisted 9,000 more farmers who installed enduring conservation practices such as terraces and grassed waterways. Through ACP, farmers and ranchers applied water conservation practices benefiting 598,000 acres, terrace systems benefiting 382,000 acres, and conservation tillage benefiting 986,763 acres. ASCS administers ACP and provides cost sharing. SCS provided soil loss data to ASCS for 197 counties using the agency's variable cost-share program. Based on the data, ASCS directs cost-share funds to the worst soil erosion problems.

Great Plains Conservation Program

In the 10 Great Plains States, 791 farmers and ranchers signed long-term contracts to apply permanent conservation measures on 1.8 million acres, bringing the acreage to date under Great Plains Conservation Program (GPCP) contracts to 129 million. Farmers completed 1,081 contracts on 3.6 million acres. Through GPCP, SCS provides technical assistance and cost sharing to landowners to reduce the hazards of recurring drought and wind and water erosion.

Rural Abandoned Mine Program

SCS administers the Rural Abandoned Mine Program (RAMP), authorized by Section 406 of the Surface Mining Control and Reclamation Act. Through RAMP, SCS provides technical and financial assistance to land users in reclaiming soil and water resources on rural lands adversely affected by past coal mining.

By the close of fiscal year 1984, the program's seventh year, 425 contracts obligating \$44.2 million had been signed. Conservation work done under these contracts reduced soil erosion by 406,200 tons, eliminated 701 safety and health hazards, and improved water quality in 50,587 acres of lakes and 184 miles of streams.

Volunteers

Close to 600 volunteers, of all ages, donated 60,000 hours in 1984 to help SCS with soil and water conservation. Their time, most of it spent in field tasks, is valued at almost half a million dollars.

Soil Erosion Research

SCS continued to support research on how specific properties of eroding soils relate to losses in crop yields. SCS is also part of an interagency team with USDA's Agricultural Research Service (ARS) and Economic Research Service (ERS) in developing an Erosion Productivity Impact Calculator (EPIC).

EPIC is a simulation computer model with soil erosion, weather, plant growth, and other components designed to determine the relationship between productivity and soil erosion, fertilization rates, conservation practices, crop rotations, and other practices. An SCS soils specialist is assigned to the team, and SCS is providing funding for the project. SCS is using EPIC in making the 1985 appraisal under the Soil and Water Resources Conservation Act of 1977.

Soil Moisture Monitoring

This was the fifth year that SCS monitored eight soil moisture measurement sites in the United States. Specialists take weekly measurements at the sites by 6-inch increments to a depth of 6 feet during the growing season. The data are being stored at the National Soil Survey Laboratory in Lincoln, NE, and will be useful in irrigation scheduling, dryland farming, and soil classification. The study has been extended 3 years to include more weather variability.

AgRISTARS

USDA and three other Federal agencies continued work on forecasting crop production and inventorying renewable resources through a cooperative research program, Agriculture and Resources Inventory Surveys Through Aerospace Remote Sensing (AgRISTARS). SCS is testing a prototype mobile instrument it developed that uses nuclear magnetic resonance to measure soil water content continuously in the surface 3 inches at up to 10 miles per hour.

Colorado River Basin Salinity Control Program

To date, in the Arizona Wellton-Mohawk salinity control project, SCS has assisted irrigators to develop 318 salinity control-water management plans for treating more than 44,300 acres. Average onfarm irrigation efficiencies have risen from 55 percent to 80 percent, greatly reducing saline return flows to the Colorado River. The U.S. Department of the Interior's Bureau of Reclamation provides financial assistance. Projects in the Uinta Basin, UT, and Grand Valley, CO, have reduced the total annual salt load to the Colorado River by about 34,700 tons. SCS provides technical assistance on these projects and ASCS provides cost-sharing funds. Also cooperating are the Extension Service, ARS, and the Bureau of Reclamation.

In 1984, Congress enacted Public Law 98-569 to amend the Colorado River Salinity Control Act of 1974 and authorize the Secretary of Agriculture to operate a voluntary onfarm salinity control program for the Colorado River Basin.

Small Watershed Projects

SCS began construction on 20 new Public Law 83-566 small watershed projects in 1984, approved planning for 34 projects, authorized installation of 19 projects, and completed construction on or closed out 11 projects. Small watershed projects combine conservation measures and structural and nonstructural measures to reduce flood damage and provide agricultural water management, municipal and industrial water, recreation, and wildlife habitat.

Resource Conservation and Development Areas

In fiscal year 1984, work continued in the 194 areas authorized for assistance under the Resource Conservation and Development program. SCS provides USDA leadership for these locally initiated, sponsored, and directed areas designed to conserve natural resources, accelerate economic development, and reduce unemployment where needed to stimulate the local economy. Over 1,300 individual project measures were completed in 1984. Financial assistance was provided on 172 of these measures.

Emergency Assistance

Under Section 403 of the Agricultural Credit Act of 1978, SCS funded \$19.2 million worth of emergency watershed protection work to help States repair damage caused by floods and other natural disasters.

Emergency Jobs Act

Funds made available under the 1983 Emergency Jobs Act (Public Law 98-8) enabled SCS to fund additional watershed, flood prevention, emergency watershed protection, and resource conservation and development measures. SCS obligated \$44.4 million in fiscal year 1984 to fund approximately 600 measures in high unemployment areas in 41 States.

River Basin Studies

SCS leads USDA cooperation with other Federal, State, and local agencies in making investigations and surveys of river basins to guide the development of water and related land resources in agricultural, rural, and upstream watersheds. In 1984, 52 river basin studies were in progress in 41 States and 9 were completed.

Flood Plain Management

Under Section 6 of Public Law 83-566, SCS completed 43 flood plain management studies and 14 reimbursable flood insurance studies in 1984. The studies include data on natural and beneficial values served by flood plains and on management alternatives. Local units of government use this information to develop, adopt, implement, and amend flood plain management programs.

Resource Inventories

The fieldwork for the 1982 National Resources Inventory (NRI) was completed in 1982. The final NRI data were released in 1984. The data include information on soil, water, vegetation, and related resources. SCS is evaluating using remote sensing techniques for making future inventories.

Snow Surveys

Through its Snow Telemetry System (SNOWTEL), SCS collected snowpack information at 489 automatic data collection sites in the western United States. SCS also issued more than 3,500 water supply forecasts used by municipal water authorities, irrigation companies, and individuals.

In 1984, snow survey data and water supply forecasts helped reservoir operators avoid flooding problems from the above average snowpack recorded throughout most of the West.

Cartography and Geographic Information Systems

The SCS National Cartographic Center produced 58,000 conservation plan maps for land users and 1,400 base and thematic maps. The center also produced photobase maps for 215 soil surveys.

SCS continued to support the National High Altitude Photography (NHAP) program and a contract was awarded for photographing the remaining 6 percent of the continental United States. SCS is planning to obtain leaf-on imagery through the NHAP program for use in natural resource inventories.

Important Farmland Inventory

As authorized by Section 302 of the Rural Development Act of 1972, SCS leads USDA efforts for inventorying the Nation's important agricultural areas. By the end of fiscal year 1984, SCS had published important farmland maps—which delineate prime, unique, and other important farmlands—for 911 counties. In addition, statewide prime farmland maps have been completed for 18 States.

Rural Development

Through State and local Food and Agriculture Councils, SCS cooperated with many others to improve program delivery in rural development. SCS assisted 29,165 units of government in rural communities to control flooding, reduce roadside erosion, improve the landscape, and preserve historical and cultural resources. Many private citizens volunteered their time and talents to these activities to gain for their communities rural, municipal, and industrial water supplies; irrigation water; and recreation areas.

Working with other USDA agencies and the Office of Rural Development Policy, SCS helped local officials participate in the "Main-street Program," an effort to preserve rural downtown areas. SCS also assisted with USDA's small and family farm resource development initiative, various farm projects, and special conservation projects.

Farmland Protection

In July 1984, SCS published the final rule for implementation of the Farmland Protection Policy Act of 1981. The rule was published as required in the law and contains criteria for use by Federal agencies to assess the effects of proposed actions on farmland.

Water Quality

SCS signed agreements with the U.S. Environmental Protection Agency (EPA) to ensure continued cooperation on water quality management planning and implementation and maintain liaison positions in the Great Lakes and the Chesapeake Bay. SCS served on a national nonpoint source task force which developed and recommended the establishment of a national policy for nonpoint source pollution control in surface and ground water. SCS is also cooperating with EPA in an assessment by States to establish a 1984 baseline for nonpoint source problems to measure future progress.

More than 6,000 employees of SCS, districts, and other local and State agencies received training through SCS water quality training modules.

Rural Clean Water Program

The Rural Clean Water Program (RCWP) was created by Public Law 96-108 in 1980 as an experiment to evaluate the effectiveness of conservation practices in solving nonpoint source water quality problems. To date, 1,621 individuals have signed contracts totaling \$23 million in the 20 RCWP projects. When completed, the conservation practices in these contracts will adequately treat 296,000 acres.

The signed contracts have used 53 percent of the available RCWP cost-share assistance for treatment on 57 percent of estimated critical areas.

Range

The 1982 National Resources Inventory data support the use of range condition and trend as more accurate indicators of resource degradation on rangeland than soil erosion alone. SCS continued to promote the proper management of rangeland vegetation to protect soil and water resources while improving the efficiency of livestock production. Ranchers' interest in intensive grazing systems remained high and SCS helped them to monitor and evaluate how the systems affect plant communities, soil and water resources, livestock performance, and wildlife habitat.

Windbreaks

SCS assisted with planting an estimated 2,000 miles of field windbreaks in 1984 to protect cropland from wind erosion and provide wildlife habitat. The agency also assisted landowners with planting farmstead and feedlot windbreaks to save energy.

Fish and Wildlife

Studies supported by SCS showed that more species and greater numbers of birds and more small mammals use no-till cropland fields than conventionally tilled fields. SCS also worked on developing procedures for evaluating how conservation farming affects plant and animal life in and along waterways. These activities identify opportunities to integrate fish and wildlife habitat management with National Conservation Program priorities.

Plant Materials

SCS plant materials centers released 14 conservation plants in 1984. The releases include six grasses for controlling soil erosion, four of which also improve forage production; three grasses, one shrub, and one legume for critical area treatment; two shrubs for farmstead and multi-row field windbreaks and improving wildlife habitat; and one shrub for restoring depleted rangeland.

Cultural Resources Activities

SCS streamlined its procedures for considering cultural resources in conservation planning. This will ensure the protection of valuable cultural resources while reducing costs.

Two significant finds from cultural resources studies made in 1984 were the discovery of a Triassic Age fossil bed in Virginia and the first datable prehistoric evidence of an earthquake episode associated with the New Madrid fault zone in Arkansas.

Sociological Assessments

SCS issued a national social sciences manual that contains guidelines and procedures for conducting sociological evaluations of soil and water conservation programs and activities. A study of how farmers in 112 counties in 13 States view resource conservation, learn about conservation, and decide to adopt conservation practices was completed. SCS will use the information to work more effectively with farmers. A sociological study continued in Illinois, Washington, and Idaho on farmers' adoption of conservation tillage.

Information Resources Management

SCS and the Farmers Home Administration cooperated on developing a joint procurement contract for purchasing microcomputers for their field offices. This will save Federal dollars through better volume discounts.

Reform 88

SCS made cost-saving improvements under Reform 88—an initiative to streamline management throughout the Federal Government—in several areas including travel, training, paperwork, administration, and the automation of soil and other natural resource data.

SCS travelers began using charge cards issued by the agency for official travel expenses in combination with the General Services Administration travel agent program. Use of the charge cards is reducing cash travel advances and improving cash management.

Engineering

SCS received a Federal Design Achievement Award from the National Endowment for the Arts for the 40-acre Pine Creek detention basin in the Lower Pine Creek watershed in California. SCS completed a 4-year study of filters and established new criteria for filter gradation design and seepage control around principal spillway conduits and issued new standards and specifications for soil mechanics testing and a guide for determining permeability of sands and gravels used in filter and drainage design. A trickle irrigation chapter was published in the National Engineering Handbook.

Conservation Education

SCS helped the National Wildlife Federation to choose "Soil—We Can't Grow Without It" as its 1985 National Wildlife Week theme. Through television announcements, 500,000 educational kits, and other material, the Federation will reach at least 100 million people during the year with the story about soil conservation and how it benefits wildlife.

International Activities

In 1984, 139 SCS employees traveled to 39 countries to provide technical assistance requested by the Agency for International Development (AID), international organizations, and individual nations. Through the Soil Management Support Services, funded by AID, SCS helped developing countries to classify soils, make soil surveys, and use the information to conserve and manage their soil resource. International activities are carried out in cooperation with USDA's Office of International Cooperation and Development.

Resources Conservation Act Appraisal

The second appraisal of the soil, water, and related resources of the Nation required by the Soil and Water Resources Conservation Act of 1977 is underway. It is focusing on a comparison of the 1977 and 1982 National Resources Inventory, the highest soil and water conservation priorities in the National Conservation Program, and resource concerns identified by the public and interest groups.

Summary of Accomplishments Fiscal Year 1984

Accomplishments in soil and water conservation programs assisted by the Soil Conservation Service.

Progress Item	Fiscal Year 1984	Cumulative to Sept. 30, 1984	Progress Item	Fiscal Year 1984	Cumulative to Sept. 30, 1984
Long-term Contracts					
Contracts completed or terminated					
GPCP	No. 1,159	56,456	Resource Conservation and Development Areas		
	acres 3,692,866	105,306,844	Areas authorized for assistance	No. —	194
RAMP	No. 7	25		acres —	848,399,983
	acres 142	222	RC&D measures completed	No. 1,372	21,565
Watershed protection and flood prevention	No. 499	2,669	Conservation Plans and Related Services		
	acres 43,733	463,313	District cooperators	No. 89,168	2,352,823
Contracts signed				acres 21,888,427	865,434,845
GPCP	No. 791	65,042	Individuals and groups assisted	No. 919,500	—
	acres 1,796,501	129,209,632		No. 395,826	—
RAMP	No. 101	423	Individuals and groups applying practices		
	acres 2,112	8,412	Conservation plans	acres 33,310,705	683,516,818
Watershed protection and flood prevention	No. 1,325	5,367	Conservation Help for Units of Government		
	acres 173,431	784,216	Land use and treatment site plan reviews	No. 34,270	—
Unserviced applications			Units of government assisted	No. 26,601	—
GPCP	No. 1,485	—	Soil Surveys		
	acres 3,198,622	—	Soil surveys	acres 42,632,853	1,783,139,477
RAMP	No. 27	—			
Watershed protection and flood prevention	No. 1,620	—			
	acres 260,464	—			

The Celebration Has Begun

Hundreds of special activities are being held across the Nation to observe the 50th anniversary of the Soil Conservation Service. Conservation districts, SCS offices, and other organizations are commemorating 50 years of soil and water conservation. Activities during the past year have included:

Alabama: The SCS State office produced and distributed 1,000 automobile bumper stickers with the message "Soil and Water Conservation/Half Century of Progress."

Alaska: The slide show "The First 50 Years" has been shown at district meetings and universities.

Arizona: The Apache Natural Resources Conservation District provided a conservation tour, barbecue, and birthday cake to three busloads of guests.

Arkansas: Bulletin boards depicting the history of SCS and farming through photographs have been set up at many district offices.

Caribbean Area: Articles about conservation and the anniversary have been written in English and Spanish for release during Puerto Rican Land Week.

California: A day-long press briefing, featuring speakers from SCS and other agencies, covered resource accomplishments, problems, and needs in the State.

Colorado: Ninety-two runners participated in a "Conservation Celebration Run" sponsored by the Shavano Soil Conservation District.

Connecticut: Early demonstration projects in the State were described in a presentation to a professional society by Joyce Palmer, SCS soil conservationist.

Delaware: Preparations have been made for a conservation fair sponsored by the districts and other natural resource agencies.

Florida: The State office has written scripts and is videotaping public service announcements featuring U.S. Senator Lawton Chiles.

Georgia: The 50th Anniversary Exhibit was shown at the Sunbelt Agricultural Expo at Moultrie. Total attendance was approximately 250,000.

Hawaii: A history of SCS and the 15 districts on the islands has been prepared for publication by one of the districts.

Idaho: A history of conservation in the State has been written and is to be published by the districts, the Idaho Soil Conservation Commission, and SCS.

Illinois: The Illinois Land Improvement Contractors Association held a 3-day conservation expo with the theme "50 Years of Preserving Tomorrow."

Indiana: The State office prepared an exhibit on the history of SCS in Indiana by using photographs and quotes of retired SCS employees.

Iowa: Free chili dinners and a dance were sponsored by the Guthrie Soil Conservation District. A dinner for retirees was held in Des Moines.

Kansas: A slide show, "Conserving Soil and Water—A Half Century of Progress," and historical exhibits have been displayed across the State.

Kentucky: The State office designed an anniversary logo that is being worn as a badge by many SCS employees in the State. A state-wide farm magazine has requested to use the logo on a commemorative cover.

Louisiana: The Louisiana Association of Conservation Districts used "One-Half Century of Conservation" as the theme of its

annual convention and accompanying 12-page booklet.

Maine: The York County Soil and Water Conservation District observed its 40th anniversary and SCS's 50th with a slide show at its annual meeting.

Maryland: A radio station in Frederick County held an on-the-air trivia contest centered around conservation and the history of SCS.

Massachusetts: The Berkshire Conservation District has arranged to show "The Grapes of Wrath" and other land-oriented movies in a free film festival.

Michigan: A special banquet concluded a 1-day program on the history of soil conservation during the annual Agriculture and Natural Resources Week at Michigan State University.

Minnesota: A major farm magazine interviewed the SCS State conservationist and the two former State conservationists for a historical article.

Mississippi: The Area 5 office prepared an anniversary exhibit for a 2-day meeting in



Nearly 500,000 South Carolina telephone directories carried this photograph of contour stripcropping in Anderson County on a 50th anniversary commemorative cover.

Photo by Tim McCabe, visual information specialist, SCS, Washington, DC.

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Jackson of the Mississippi Association of Conservation Districts.

Missouri: The historical importance of SCS was included in a 4-day symposium on "Soil and Water Conservation" at the University of Missouri-Columbia.

Montana: Governor Ted Schwinden has recorded "a salute and a thank you" on 30- and 60-second public service announcements for radio and television.

Nebraska: The Nebraska Association of Resources Districts sponsored a soil and water category in the State's National History Day contest for grades 6-12.

Nevada: Preparations have been made to hold open houses in all 14 field offices.

New Hampshire: The theme of the annual meeting of the New Hampshire Association of Conservation Districts was "New Hampshire—Yesterday, Today, Tomorrow."

New Jersey: A 9-foot cloth banner proclaiming "USDA Soil Conservation Service—Working With Districts—50 Years" has been used at meetings and fairs.

New Mexico: The State Senate and State House passed memorials commemorating 50 years of service to the State by SCS and the districts.

New York: A horse race at the Saratoga Harness Track was sponsored by the Saratoga Soil and Water Conservation District in honor of the anniversary.

North Carolina: The anniversary of SCS has been recognized at the State Fair and on many other occasions as part of the State's "Soil and Water '84" campaign.

North Dakota: Photographs assembled by the State office have been on display in the visitor center of the Theodore Roosevelt National Park at Medora.

Ohio: All 88 districts are encouraging citizens to "Ring a Bell For Conservation" at 10 a.m., Friday, April 26.

Oklahoma: "The Golden Anniversary of Conservation" was the theme of a 4-day convention of the Soil Conservation Society of America in Oklahoma City.

Oregon: The Oregon Association of Conservation Districts has been building dis-

plays for installation at seven rest areas on major highways across the State.

Pennsylvania: A new booklet, "Soil Conservation—Our Past, Your Future," by R. M. Davis, former SCS administrator, was released at an anniversary banquet.

Rhode Island: The State Department of Environmental Management noted the anniversary of SCS in material sent to 900 teachers for National Wildlife Week.

South Carolina: Southern Bell is publishing 500,000 telephone directories with a 50th anniversary commemorative cover.

South Dakota: The Governor's proclamation for "A Year of Soil and Water Conservation" will end on Arbor Day in April with the planting of the 150 millionth tree by districts.

Tennessee: A retired SCS employee, Tom Pointer, has been compiling a history of SCS in the State. The volume is looseleaf, "so that it can be added to."

Texas: Larry Sullivan Day was proclaimed in Temple to honor an award-winning conservation farmer "of the type that has made the 50 years of SCS a success."

Utah: A float proclaiming 50 years of SCS service to farmers, cities, and the State won top honors at the annual Pioneer Days Parade in Moab.

Vermont: For use on correspondence, the State office purchased 10,000 stick-on labels showing the 50th anniversary logo on a background of gold.

Virginia: Governor Charles Robb spoke to 150 people on a conservation tour in the targeted Piedmont Bright Leaf Erosion Control Area. The tour included 50-year-old terraces.

Washington: Several banks are using their electronic message signs to urge passers-by to "Join in the Celebration of Soil and Water Conservation."

West Virginia: Old photographs of activities of the Soil Erosion Service and the Civilian Conservation Corps have been used in four displays across the State.

Wisconsin: Historical displays created at the SCS State office have been set up at county fairs and in the lobbies of public buildings.

Wyoming: Governor Ed Herschler planted an evergreen tree on the grounds of the State Capitol in Cheyenne in a ceremony paying tribute to SCS.

Paul D. Barker,
associate editor, *Soil and Water Conservation News*,
SCS, Washington, DC



One of the photographs the West Virginia State office used in a display shows workers at a Civilian Conservation Corps camp building a diversion.